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TEST PLAN

EVALUATION TESTS OF THE CLAM (EAK [redacted])

25X1

I. Purpose:

This Test Plan is to provide the procedures for tests to be conducted on a "Clam" explosive container to determine its effectiveness and adaptability when employed under a wide variety of conditions.

II. Objective of Tests:

The objective of these tests will be to evaluate the "Clam" design from the standpoints of functional performance, reliability of firing train, dropability, handling, and storage.

III: Test Procedures: Test 1: Penetration

a. Three "Clams" will be tested in each penetration test.

(1) On steel plates of varying thicknesses from ¼ in. at ¼ in. increments, i. e. ¼", ½", 3/4" to failure.

(2) Cast iron tests. (Scrap engine block, CI plate etc.)

b. Position tests to determine effectiveness of penetration in various positions (with detonator on top, etc.)

Test 2: Rate of detonation, ten tests per series.

a. Compare rate using one cap as against dual initiation.

b. Compare rates at three densities or degree of compaction.

Test 3: Dropability.

a. Test 10 "Clams" with dummy caps and C-4 simulant at heights up to 10 ft.

(1) Check to see whether lids are secure.

(2) Check for damage to "Clam".

(3) Check delay firing devices for damage or activation.

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Test 4: Holding or adhering qualities.

a. Tests will be conducted with dummy caps and explosive simulant.

b. [redacted] 25X1

Test 5: Handling at various temperatures. Each test will be run at -30° F, 70° F and 120° F, 10 "Clams" for each temperature range.

a. Studies on ease of handling and time for loading "Clams" with (C-3 and C-4).

b. Time studies on handling "Clam" (i. e. closing, placing caps, and delay firing devices).

Test 6: Reliability of Firing Train under various conditions.

a. Test 100 units at -30° F.

b. Test 300 units at 70° F.

c. Test 100 units at 120° F.

(1) Underwater test 10 units 70° F, 48 hrs. - 6 inch water.

(2) Underwater test 10 units 70° F, 48 hrs. - 12 inches water.

(3) Continue underwater tests increasing depth by 6 inch increments until unit fails.

d. Humidity test 10 units at 120° F, 90% humidity - 48 hrs. Then test fire.

IV. Equipment to be obtained for the tests.

a. 1000 "Clam" containers.

b. 700 non-electric blasting caps.*

* on hand

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e. 800 M1 delay firing devices.**

d. 200 lbs. C-4, (bulk).*

e. 20 lbs. C-4 simulant, (inert).*

f. 90 dummy blasting caps.*

g. Steel plate, ¼ in, ½ in, 3/4 in. and 1 in. in thickness.*

h. 3 each salvage auto or truck engine blocks.***

* On hand

** On order, estimated delivery date 20 days.

*** Obtainable from salvage on short notice.

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